

## Catalogue of American Amphibians and Reptiles.

Villa, Jaime D. 1988. *Crisantophis*, *C. nevermanni*.

***Crisantophis* Villa**

*Crisantophis* Villa 1971: 173. Type species, *Conophis nevermanni* Dunn 1937, by monotypy.

• **Content.** A single species, *Crisantophis nevermanni*, is recognized.

• **Definition.** Medium-sized snakes (maximum total length 825mm) of generalized colubrid features (superficially resembling *Coniophanes* and *Conophis*). The head is moderately distinct from the neck, its profile is rounded in outline, with the rostral slightly overhanging the lower jaw, but not recurved as in *Conophis*. The eye and the pupil are round; the nasal is divided; there are 13-14 maxillary teeth, increasing in size posteriorly and followed by a short diastema and by one or two enlarged fangs, laterally compressed and grooved throughout their length; the palatine bears 10-11 teeth that increase in size posteriorly, as do those of the pterygoid (33-35) and dentary (21-22); the hemipenes are long (reaching to subcaudals 12-15), slender, subcylindrical and bilobed, with the branches of the sulcus spermaticus being of the "centripetal" type (of Myers and Campbell, 1981), diverging moderately at the base of the fork and extending onto the lobes of the hemipenis in a centrolineal direction, but each branch curving medially and thereafter facing its fellow along most of its length; the proximal two-thirds of the organ is naked, lacking basal hooks, flounces and calyces, but it has spinules covering the distal third; the hemipenes are awned and noncapitate. The trunk vertebrae have high neural spines, low hypapophyses, and postzygapophyses with rounded articular surfaces. There are 19-19-17 rows of straight smooth dorsal scales, 173-183 ventrals, a divided anal, and 71-89 divided subcaudals. The head shields are those of a generalized colubrid with a divided nasal, a single loreal, 1 preocular and 2 postoculars; the temporals are usually 2+2, sometimes 1+2; there are usually 8 supralabials, the 4th and 5th entering the orbit, and 9-10-11 lower labials, the first five in contact with the chin shields. The basic color pattern is dark dorsally and light ventrally. The dorsal color varies from light chocolate brown through dark gray to jet-black stripes of varying thickness separated by lighter thin lines which vary from light yellow to dull white; the venter is immaculate white or cream except for some dark punctations on the ventrals near the first row of dorsals. The juveniles are brilliantly colored, but the adults darken and they may or may not undergo an ontogenetic color change which results in an almost completely black dorsum with one or two thin light lines, one on the lower half of the second dorsal scalerow and a thinner one on the adjacent halves of scalerows 6-7; this stripe continues to the head; the punctations on the edge of the ventrals may coalesce forming a solid or interrupted stripe; the top of the head is dark, lightening laterally; lateral head scales are light with a varying amount of dark punctations; the sutures around the rostral, mental and between most of the upper and all the lower labials are delineated by dark brown or black; the chin shields and gular areas are light.

• **Descriptions, Illustrations, Distribution, Fossil Record, Nomenclatural History, and Pertinent Literature.** See species account.

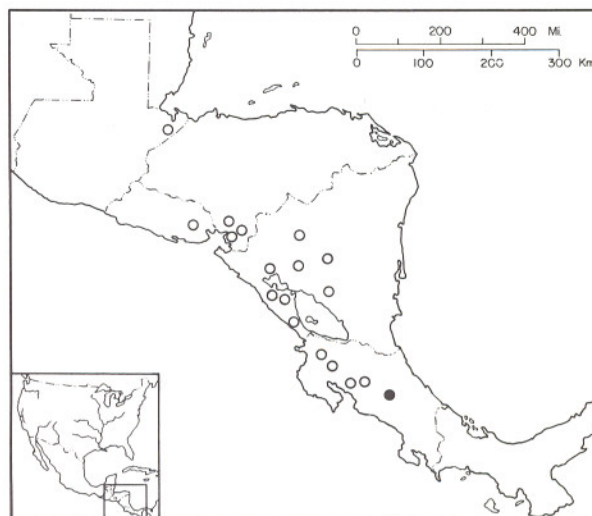
• **Etymology.** The genus is named in honor of Crisanta Chaves, late director of the National Museum of Nicaragua.

***Crisantophis nevermanni* (Dunn)**  
**Ranera Rayada**

*Coniophanes imperialis imperialis* (nec Baird and Girard):

Wettstein 1934: 37-38.

*Conophis nevermanni* Dunn 1937: 214. Type locality, "Rio Poas de



**Map.** Solid circle indicates the type-locality. Open circles mark other localities.

Aserri [San José Province, Cantón de Aserri, Costa Rica] (a few miles south of San José). Holotype, Academy of Natural Sciences of Philadelphia No. 22423, a young female obtained by Manuel Valerio, date unknown (examined by author).

*Crisantophis nevermanni*: Villa, 1971: 173. First use of present combination.

• **Content.** No subspecies have been described.

• **Definition.** As for the genus.

• **Descriptions.** The most complete and recent descriptions of general body pattern, scutellation and color are in Wilson and Meyer (1982, 1985), others are in Dunn (1937), Hidalgo (1981), Villa (1969, 1971), and Wellman (1963). The juveniles and habits of the snake were described by Villa (1969). Villa (1971) described the hemipenis, which description was augmented on by Myers and Campbell (1981). Some osteological features were described by Villa (1971). The karyotype remains to be described. The type locality was briefly described by Savage (1974).

• **Illustrations.** The first illustration of *Crisantophis nevermanni* was a figure of the dorsal midbody pattern of a dark adult published by Wellman (1963) and copied by Peters and Orejas-Miranda (1970). A diagram of the juvenile midbody pattern was published by Villa (1969). The hemipenes and left maxillary were figured by Villa (1971), with the latter illustration copied by Szarski (1976). No photographs of living specimens have been published; Taylor's (1955) photograph of "*Conophis lineatus nevermanni*" actually represents a *Conophis lineatus dunni*.

• **Distribution.** *Crisantophis nevermanni* is typically found in xeric lowland environments [Tropical Dry and Tropical Very Dry Forest bioclimates in Holdridge's (1967) scheme] on the Pacific versant of Middle America from southeastern Guatemala, El Salvador, through Honduras, Nicaragua, to the Meseta Central of Costa Rica. Most of the altitudinal records are from below 50m, with the highest at the type locality, approximately 1250m, a Premontane Wet bioclimate (Savage 1974). Individuals are more frequently found near streams, rivers, and water basins, and are frequently found in the water. They can be especially abundant in flooded rice fields, as in the Sébaco area of Central Nicaragua.

• **Fossil Record.** None.

• **Nomenclatural History.** The species was placed in the genus *Conophis* by Dunn (1937) because "it is similar in scutellation and



dentition to *C. lineatus*," although there are obvious differences, especially in the shape of the head. Dunn had only two females and he noted that "it would be interesting to compare the hemipenis of this snake with that of *C. lineatus*." Wellman (1963) reviewed the genus *Conophis* and placed *nevermanni* in the *lineatus* group, although he recognized that it "differs so much from the other species (*lineatus* and *pulcher*) that it might be placed in a separate group." Again, he did not examine the hemipenes. Villa (1969) described the hemipenes of a Nicaraguan specimen noting important differences from those of other *Conophis*, as well as other differences. He concluded that "if the hemipenes of the above mentioned specimen are not aberrant [they were, in fact, incompletely everted] and hemipenal structure can be used as a valid taxonomic indicator it may eventually be proved that *nevermanni* should be placed in a different genus other than *Conophis*." On the basis of the study of additional male specimens with fully everted hemipenes and a study of some dental and osteological features, Villa (1971) removed *nevermanni* from *Conophis* and erected the genus *Crisantophis*.

• **Pertinent Literature.** The most comprehensive accounts of this species are found in Villa (1969, 1971), Wellman (1963) and Wilson and Meyer (1982, 1985), with additional information on the hemipenes and a geographic range extension into Guatemala published by Myers and Campbell (1981). The relationships of this species to other genera remain to be elucidated. The species has been included in the checklists of Savage and Villa (1986), Villa (1970, 1983) and Villa et al. (1988).

• **Etmology.** The name *nevermanni* is a patronym honoring Ferdinand Nevermann, a physician then residing in Costa Rica, who accompanied Emmett Reid Dunn on some of his field trips.

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